

**REMARKS**

Elected Group I claims 1-25, 21 and 32 are before the Examiner. Remaining claims 26-30 and 33-52 have been withdrawn from consideration by the Examiner. Applicants have amended certain claims as reflected in the listing of claims, and added new claim 53. New claim 53 is a member of the elected Group I claims and is thus properly before the Examiner. Support for claim 53 may be found in the specification as filed (See e.g., paragraph 0022). The amendments do not add new matter to the instant application.

Applicants amended the specification to correct typing errors to properly reflect that one of the cleavage sites of the claimed substrates is Glu<sup>373</sup> – Ala<sup>374</sup>. Support for these corrections may be found in the specification (See e.g., paragraphs 0005-0007 and 0021). No new matter has been added by this amendment.

In response to the Office Action of July 14, 2004 (hereinafter "Office Action"), Applicants submit herewith a copy of the "Application Data Sheet."

**§101 Rejection**

As reflected in the listing of claims, Applicants amended the claims to recite that the claimed peptides are "isolated." Accordingly, Applicants submit that the rejection under §101 has been overcome.

**§112 2<sup>nd</sup> Paragraph Rejection**

Applicants amended claims 15-23 to recite that the claimed peptide fragment is a proteolytic cleavage product of the substrate recited in claim 1. Applicants submit that the amendments obviate the §112, 2<sup>nd</sup> paragraph rejection.

**§112, 1<sup>st</sup> Paragraph, (Written Description) Rejection**

The Examiner rejected claims 1-25, 31 and 32 under §112, first paragraph (written description). Applicants respectfully traverse the rejection. At the time of filing, Applicants' specification would have readily conveyed to those of ordinary skill in the art that Applicants were in possession of the full scope of the subject matter recited in the claims as filed. The Examiner has not advanced any evidence reflecting the perspectives of one of ordinary skill in the art to the contrary. The recitation of "ADMP-susceptible" in the claims as filed would have clearly guided the skilled artisan to conclude that Applicants were in possession of aggrecan peptides susceptible to aggrecanase activity. The exemplary sequences described by Applicants in the specification would have further bolstered the conclusion that Applicants were in possession of the invention defined by the claims as filed.

However, in the interest of furthering the prosecution of this application, Applicants submit that the claims as amended are adequately and clearly described in the specification. For example, the added recitations of "aggrecan" and "fragment" to the claims are adequately described in Applicants' specification. Additionally, the amendments to claims 15-23 reciting a proteolytic cleavage product of the peptide of claim 1 are clearly described in the specification (See e.g., paragraphs 0021, 0022, 0031 and 0032). Moreover, the representative sequences (e.g., SEQ ID NO's 1-6) disclosed in the specification would have been sufficient to convey to those of ordinary skill in the art that Applicants were in possession of the full scope of the claimed invention. Accordingly, Applicants submit that the claims are adequately described by

the specification and that the §112, first paragraph written description rejection should be withdrawn.

**§112, 1<sup>st</sup> Paragraph (Enablement) Rejection**

The Examiner rejected claims 4, 7 and 8 under §112, first paragraph, for lack of an enabling disclosure. Applicants respectfully traverse this rejection and submit that the rejection is obviated by the amendment of claims 4 and 7. Withdrawal of the rejection is respectfully requested.

**§§102 and 103 Rejections**

The Examiner rejected claims 1, 15 and 16 under §102(b) in view of Fosang as well as GenBank Accession No's. NP037359 and NP00126. Applicants respectfully traverse this rejection. Neither of the cited references teach an ADMP-susceptible peptide fragment. Therefore, the cited references fail to teach each of the limitations of the claims as amended. Accordingly, Applicants respectfully submit that the rejection under §102(b) in view of Fosang and the above-referenced GenBank sequences should be withdrawn.

The Examiner rejected claims 3 and 4 under §102(b) in view of Doege and Accession No. A39086. Applicants respectfully traverse this rejection. The references fail to teach 1) an isolated aggrecan peptide fragment consisting of amino acids 1-40 of SEQ ID NO:1; or 2) an isolated aggrecan peptide fragment comprising a sequence of amino acids that is at least 80% identical to the sequence consisting of amino acids 1-40 of SEQ ID NO:1. Accordingly, Applicants respectfully submit that the rejection under §102(b) in view of Doege and Accession No. A39086 should be withdrawn.

The Examiner rejected claim 5 in view of Hering, and claims 6-7 in view of Antonsson, under §102(b). Applicants respectfully traverse the rejections. The references fail to teach 1) an isolated aggrecan peptide fragment consisting of amino acids 1-40 of SEQ ID NO:2; 2) an isolated aggrecan peptide fragment consisting of amino acids 1-40 of SEQ ID NO:3; or 3) an isolated aggrecan peptide fragment comprising a sequence that is at least 80% identical to the sequence consisting of amino acids 1-40 of SEQ ID NO:3. Accordingly, Applicants respectfully submit that the rejections under §102(b) in view of Hering and Antonsson, should be withdrawn.


### **§103 Rejection**

The Examiner rejected claims 2,8,11-14, 17-21, 31 and 32 under §103 in view of Fosang and Koritsas. The Examiner also rejected claims 10, 22, and 23 under §103 in view of Fosang, Koritsas, and Duan *et al.* Applicants respectfully traverse these rejections. As provided above, Fosang does not teach each and every limitation of the amended claims. Furthermore, neither Koritsas nor Duan cure the deficiencies of Fosang. Therefore, neither the combination of Fosang and Koritsas, nor Fosang, Koritsas, and Duan, would have rendered obvious the subject matter recited in Applicants' claims. Therefore, Applicants submit that the §103 rejection should be withdrawn.

No fee is deemed necessary by applicants in connection with this filing, other than the fee required in connection with the accompanying petition. However, if any other fee is required, authorization is hereby given to charge the amount to Deposit Account No. 19-3880 in the name of Bristol-Myers Squibb Company.

Bristol-Myers Squibb Company  
Patent Department  
P.O. Box 4000  
Princeton, NJ 08543-4000  
(609) 252-3883

Respectfully submitted,

  
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Brian C. Carey  
Attorney for Applicant  
Reg. No. 44,590

Date: November 14, 2005